REMARKS

Claims 1-30 are pending. Claims 15-18 and 25-29 are withdrawn. The Office Action mailed September 5, 2008 [hereinafter "Office Action"] rejected Claims 1-7 and 14 under 35 U.S.C. 101 for being directed toward non-statutory subject matter. The Office Action objected to Claims 4-5 and 7 for failing to further limit the subject matter of a previous claim. The Office Action rejected Claims 1-7, 8-13, 14, 19-24, and 30 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The Office Action rejected Claims 1-7, 8 and 14 under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention. The Office Action rejected Claims 19-24 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,401,034 to Srivastava et al. [hereinafter "Srivastava"]. The Office Action rejected Claims 1-7, 8-13, 14, 19-24, and 30under 35 U.S.C. § 103(a) as being unpatentable over Srivastava in view of U.S. Patent Application No. 2003/0018558 to Hefner [hereinafter "Hefner"].

AMENDMENTS TO THE CLAIMS

Claims 1-4, 7-11, 14, 19-21, and 30 have been amended to more particularly point out the features of the present invention. These amendments will be described in relation to the corresponding rejection. The amendments are fully supported by the specification, drawings, and claims. No new matter has been added.

OBJECTION TO CLAIMS 4-5 and 7

The Office Action objected to Claims 4-5 and 7 for failing to further limit the subject matter of a previous claim. Claim 4 has been amended to clarify that convexity comprises "a maximum utility surplus available in the negotiation." This amendment finds support in at least ¶ [0014] of the Specification. The Applicant submits that convexity is a calculation that can further illustrate the quality of a negotiation solution by showing the maximum utility (value) available in the negotiation. Therefore, Claim 4 further limits the computation module of Claim 1 by describing an additional computation to be performed.

Furthermore, Claim 5 describes an embodiment in which the computation module creates an option set using input from the parties with a utility definition, or values and preferences the party seeks. *See* Specification of Douglas M. Trent, filed December 30, 2003, application no. 10/748.060 [hereinafter "Specification"] at ¶ [0057]. Therefore, Claim 5 further clarifies that option sets are party specific, related to the specific negotiation the parties are involved with.

Finally, Claim 7 has been amended to clarify that the computation module may calculate the option preference. Beneficially, the computation module may calculate the option preference for a party to the negotiation from the party's utility definition. *See* Specification, ¶ [0057]. Consequently, the Applicant requests that the objection to Claims 4-5 and 7 be withdrawn.

REJECTION OF CLAIMS 1-7, 8-13, 14, 19-24, and 30 UNDER 35 U.S.C. §112 FIRST PARAGRAPH

Claims 1-7, 8-13, 14, 19-24, and 30 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Office Action states that one of ordinary skill in the art would be unable to make or use the invention. Specifically, that it is unclear which module performs the operations. The Applicant respectfully traverses these rejections.

Section 112, first paragraph states:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The Specification clearly describes the modules: the computation module in ¶¶ [0040]-[0057], the input module and storage module in ¶ [0031], and the output module in ¶ [0043]. The description of these modules is "clear and concise." For example, ¶ [0031] states:

The input module 110 receives negotiation parameters from two or more parties. In one embodiment, negotiation parameters include one or more issues, one or more options for each issue, one or more issue weights to indicate the relative importance of each issue to each party to the negotiation, and a option preference by each party for each option within each of the issues.

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Paragraph [0031] clearly states that the input module may perform receive the negotiation parameters, followed by a clear explanation of what the negotiation parameters may include. This description gives background to both the input module recited in Claim 1, as well as the process step of Claim 14 and computer implemented process step of Claim 19.

The Applicant submits that these descriptions of this and other modules, together with the flowcharts, Figures 3, 4 and 5 which depict the method/process steps, would give one of ordinary skill in the art ample basis to both make and use the invention. Consequently, the Applicant requests that the rejection under 112, first paragraph be withdrawn.

REJECTION OF CLAIMS 1-7, 8 AND 14 UNDER 35 U.S.C. §112 SECOND PARAGRAPH

The Office Action rejected Claims 1-7, 8 and 14 under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention.

Regarding Claims 1-7, the Office Action states that the modules may be software only. Claim 1 has been amended to recite:

> wherein all or a portion of the input module, the computation module, and the output module comprise one or more of logic hardware and executable code, the executable code stored on one or more computer readable media.

This amendment finds support in at least ¶¶ [0027]-[0029] of the Specification. Therefore, Claim 1 has been clarified that the modules may be implemented in hardware, or implemented on software that is stored on computer readable media, or both.

Regarding Claims 2 and 8 (9), the Office Action stated that these claims lack sufficient antecedent basis for the limitation "the maximum." The Applicant assumes that the Office Action referred to Claim 9, the system counterpart of Claim 2. These claims have been amended to recite "a maximum."

Regarding Claim 3, "the sum of the maximum" has been amended to recite "a sum of the maximum." Furthermore, "a maximum combined utility" has been clarified to indicate that it

may comprise "<u>maximum value for the plurality of parties</u>." This amendment finds support in at least ¶ [0043] of the Specification.

Regarding Claim 4, "the convexity" has been amended to recite "a complexity." Claim 14 has been amended to recite "<u>wherein each party provides an issue weight</u>" to clarify that single party provides a single issue weight for an issue. This amendment finds support in at least Table 1 of the Specification. Consequently, the Applicant requests that the rejection under 112, second paragraph be withdrawn.

<u>REJECTION OF CLAIMS 1-7 AND 14 UNDER 35 U.S.C. §101</u>

The Office Action rejected Claims 1-7 and 14 under 35 U.S.C. 101 for being directed toward non-statutory subject matter. Claim 1 has been amended to recite that the modules may be implemented in hardware, software stored on computer readable medium, or both as described above.

The Office Action rejected Claim 14 as not being a patent eligible process. The test laid out for determining if the claimed invention is a practical application of an idea is laid out in section 2106 of the MPEP as a two prong test. M.P.E.P. § 2106.IV.C.2. "A claimed invention is directed to a practical application of a 35 U.S.C. 101 judicial exception when it: (A) "transforms" an article or physical object to a different state or thing; or (B) otherwise produces a useful, concrete and tangible result, ..." *Id.* Furthermore, "The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing." M.P.E.P. § 2106.IV.C.2.

Claim 14 has been amended to recite the step of "<u>displaying the issue, the options, an option set, and the negotiation solution to the plurality of parties</u>." This amendment finds support in at least Claim 1. Therefore, Claim 14 has been clarified that these items are tangibly displayed to the plurality of parties. The parties may see the results of the solution analysis and computations. The Applicant respectfully asserts that Claim 14 clearly meet the second prong of the practical application test set forth in MPEP § 2106.IV.C.2 and that Claim 14 is statutory matter under 35 U.S.C. § 101.

REJECTION OF CLAIMS 19-24 UNDER 35 U.S.C. §102 (e)

The Office Action rejected Claims 19-24 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 7,401,034 to Srivastava et al. [hereinafter "Srivastava"]. The Applicant respectfully traverses these rejections. These Claims will be discussed below in relation to the rejection under §103(a).

REJECTION OF CLAIMS 1-7, 8-13, 14, 19-24, AND 30 UNDER 35 U.S.C. §103(a)

The Office Action rejected Claims 1-7, 8-13, 14, 19-24, and 30 under 35 U.S.C. § 103(a) as being unpatentable over Srivastava in view of U.S. Patent Application No. 2003/0018558 to Hefner [hereinafter "Hefner"]. The Applicant respectfully traverses these rejections.

The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. MPEP at § 2142. Determination of obviousness must rely on the entire record and must be by a preponderance of evidence. MPEP at § 2142. In order to determine obviousness, the Examiner must consider the differences between the claimed invention and the prior art. In addition, the Examiner must provide a "clear articulation of the reason(s) why the claimed invention would have been obvious." MPEP §2141[III]. Obviousness may be rebutted by showing that "the art, in any material respect, teaches away from the claimed invention." MPEP at § 2144.05.III. "A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant. The degree of teaching away will of course depend on the particular facts; in general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant." *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966).

There are numerous differences between the presented claims and the prior art. In addition, the Applicant respectfully asserts that Srivastava and Hefner, combined fail to teach or disclose each element of the claimed invention. Furthermore, Srivastava teaches away from the claimed invention.

Initially, it may be useful to review the invention described in the Application and the disclosures of the prior art. In general, the Application seeks to overcome problems of the prior art associated with modeling multiparty negotiations and determining the solution of maximum utility surplus in multiparty negotiations. Specification. ¶ [0001]. A negotiation may involve a plurality of parties. *Id.* at [0031]. Furthermore, each negotiation may include one or more issues with one or more options. *Id.* The invention of the Applicant calculates a sum of weighted option preference values for each option set of each issue across all parties. *Id.* at Abstract. The sum of weighted option preferences is calculated from negotiation parameters determined by the negotiation parties and a maximum sum of weighted option preferences for each issue is calculated. *Id.* The maximum of the sum of weighted option preferences for each issue forms an option set solution with the maximum negotiation payoff. *Id.* The combined utility of the maximum negotiation payoff is equal to the sum of the maximum of the sum of the weighted option preferences. *Id.* Therefore, the negotiation solution with the best utility, or value to the parties may be more readily computed.

Srivastava, however, describes an auction method for attribute-based bidding. Srivastava, Abstract. Srivastava describes a bidding for an item, each item has a plurality of attributes (such as price or delivery date), and each attribute has a relative weight. *Id.* As bids are received, a weighted score is calculated by multiplying the score of the attribute by the relative weight. *Id.* at col. 8, ll. 5-9. A composite score for the bid is calculated by totaling the weighted scores. *Id.* at col. 8, ll. 16-23. The scores are ranked. *Id.* at col. 8, ll. 31-39. Importantly, the attributes and the relative weight is set by the buyer, not the bidders. *Id.* at col. 8, ll. 18-27.

The Applicant respectfully asserts Claim 1, as amended, is not obvious over Srivastava and Hefner. Furthermore, the Applicant respectfully asserts that Srivastava and Hefner do not anticipate Claim 1 as amended. Claim 1, as amended, states:

1.   (Currently Amended) A data processing apparatus for calculating a negotiation solution,
      the apparatus comprising:
              an input module configured to receive an issue, <u>the issue comprising part of a
                  negotiation, the negotiation comprising one or more issues, the input module</u>

further configured to receive a plurality of issue weights of the issue for a plurality of parties to the negotiation for the issue, wherein each party to the negotiation provides an issue weight, each issue weight comprising a relative importance for the issue to each party, the input module further configured to receive and a plurality of options of the issue, the input module further configured to receive and a plurality of option preferences of each option for each party;

a storage module configured to store the issue, the issue weights, the options, and the option preferences;

a computation module configured to calculate a plurality of weighted option preferences of each option for each party, wherein each weighted option preference is the issue weight of the party multiplied by the option preference of the party, the computation module further configured to calculate a sum of weighted option preferences for the issue by summing the weighted option preferences for each option of the issue, the computation module further configured to calculate identify a negotiation solution from the sum of weighted option preferences; and

an output module configured to display the issue, the options, an option set, and the negotiation solution; and

wherein all or a portion of the input module, the computation module, and the output module comprise one or more of logic hardware and executable code, the executable code stored on one or more computer readable media.

The fact that a negotiation may comprise one or more issues has been clarified. In addition, the fact that each party provides an issue weight has been clarified. These amendments are supported by at least Table 1 and ¶ [0032] of the Specification.

Srivastava and Hefner fail to teach "the issue comprising part of a negotiation, the negotiation comprising one or more issues." Srivastava involves a bid for an item. However, the bids are not part of a greater transaction. In Claim 1, the issues are part of a greater transaction – the negotiation. Therefore, Srivastava fails to teach the concept of a greater transaction that includes many bids, each bid contributing to the greater whole. In Claim 1, a negotiation may involve many issues, each issue important to the parties.

The primary difference behind Claim 1 and Srivastava is that an auction (a reverse auction in Srivastava where the buyer asks for bids) is different than a negotiation. In an auction,

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one party has greater power than the others, the buying party. In a negotiation, all parties are on equal footing to try and maximize value.

Furthermore, Srivastava and Hefner fail to teach "each party provides an issue weight." In Srivastava, only the buyer provides weights to the attributes. Therefore, the bidders are not at the same level as the buyers in the auction. In Claim 1, each party to the negotiation provides weights. The difference lies in the fact that an auction is not the same as a negotiation. In an auction, the buyer and the bidders are on different sides of the transaction. In a negotiation, all the parties are in one common transaction and must compete on equal footing.

Finally, Srivastava teaches away from each party providing an issue weight. Srivastava expressly teaches away from the concept of allowing all parties to control variables of the transaction, i.e. weights. In fact, if Srivastava allowed all parties to control the variables of the transaction such as attributes and weights, the method of Srivastava would fail, being dependant on one party to the transaction (the buyer) having greater control over the outcome over the bidders.

The Applicant respectfully asserts that Claim 1 is not obvious over Srivastava and Hefner. Consequently, the Applicant respectfully asserts that Claim 1 is allowable and request that the rejection of Claim 1 be withdrawn. In addition, the Applicant asserts that Claims 2-7 are allowable because they depend from allowable claims. Furthermore, Claims 8, 14, 19, and 30 which include similar limitations to Claim 1 are also allowable for at least the same reasons as Claim 1. In addition, Claims 9-13, and 20-24 7 are allowable because they depend from allowable claims.

The Applicant respectfully asserts that Srivastava and Hefner do not anticipate Claims 2 and 3 as amended. Claims 2 and 3 recite computations that involve issues in the negotiation. As stated above, the different auctions of Srivastava do not make up a greater whole like the issues make up a negotiation. Therefore, Srivastava fails to teach Claims 2 and 3.

The Applicant has amended Claims 1-4, 7-11, 14, 19-21, and 30 in this application. The Applicant is not conceding in this application that those claims are not patentable over the art cited by the Examiner, as the present claim amendments and cancellations are only for

facilitating expeditious prosecution. The Applicant respectfully reserves the right to pursue the the subject matter of Claims 1-4, 7-11, 14, 19-21, and 30 before the amendment in one or more continuation and/or divisional patent applications.

Should additional information be required, the Examiner is respectfully asked to notify the Applicant of such need. If any impediments to the prompt allowance of the claims can be resolved by a telephone conversation, the Examiner is respectfully requested to contact the undersigned.

Respectfully submitted,

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